Segmentation System for 2006 Water Quality Assessment

Acronyms:

WQA – Water Quality Assessment
TRS – Township, Range, and Section (Public Land Survey System)
LLID – Lat/Long ID. Also referred to as Hydro Framework or HydroFW
NHD – National Hydrology Dataset
ADB – EPA's Assessment Database
WATS – Ecology's Watershed Assessment Tracking System

Conclusions:

- Ecology will use the Township, Range, and Section-based segmentation for the 2006 WQA.
- Ecology will use the 1:24,000 LLID (Lat/Long ID) water layer for the 2006 WQA.
- The draft revised Listing Policy (WQ Policy 1-11) should be ready in late fall 2005.
- Ecology anticipates a switch to the 1:24,000 NHD for the 2008 WQA if it is available.

Discussion:

The future direction of the WQA has become a bit clearer. Our focus will be to have some major changes for the 2008 listing cycle. To get there, we will take some intermediate steps for the 2006 WQA. There is insufficient time to make all the desired changes before the 2006 WQA. Some needed products will not be ready in time for the 2006 WQA. Transitioning to a NHD compatible water layer is a way to move towards the 2008 goals.

The segmentation system is independent of the GIS water layer being used. Switching either the segmentation system or the water layer will involve a process that requires manual intervention. It can't just be done automatically. The potential benefits to switching outweigh the disadvantages. It is advantageous to switch to a new segmentation system based on larger segments as well as to switch to a nationally compatible water layer. Switching both at the same time would be simpler, but would take longer than switching segments and layers at the same time. The current time schedule for preparing the 2006 WQA, combined with the unavailability of the 1:24,000NHD layer prevents us from switching both right now.

We anticipate switching from the TRS based segmentation system to a system with larger segments. At this time, the most likely candidate is a confluence-to-confluence based segmentation scheme using the 1:100,000 scale NHD. The actual water layer being used for the WQA though will eventually be the 1:24,000 NHD. The switch to NHD will go a long way towards ensuring compatibility with requirements to have a system that is

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compatible with the national dataset. We would like to get to the point where we are using the 1:24,000 NHD. But to get there, we must go through a series of changes. These changes will take time. The 1:24,000 NHD is not yet ready for use, so we cannot adopt it. The 1:100,000 NHD is ready. The drawback is that the resolution of stream details is less than we currently have with WASWIS. We do not want to lose that level of detail. The LLID system can "crosswalk" with NHD and is therefore a stepping stone to the NHD.

Year	Water Layer	Segmentation
1996	WBID	Reach
1998	WASWIS	TRS
2004	WASWIS	TRS
2006	LLID	TRS
2008	NHD	Confluence to confluence

Side discussions:

ADB – Although not a topic in our meeting, EPA is pushing for Ecology to use EPA's Assessment Database (ADB) for future WQAs. Ecology is opposed. What Ecology prefers is to feed the data directly to EPA through the "Washington Node" to the "EPA Node". We definitely want to make sure EPA gets the data they need, but we do not think ADB is the appropriate tool or technology for doing so. Some of these differences of opinion on suitability of tools is based on apparent disconnects between EPA's regional offices, their HQ, and their data infrastructure. Technology is rapidly changing. Changing to ADB will cause enormous problems for Ecology as it will require changing both the segmentation scheme as well as changing to a 1:100,000 scale NHD. This would be a step backwards. We're trying to move forward. Our goal is to use EPA's favored NHD, but we want to use the 1:24,000 scale NHD, not the 1:100,000 scale. We anticipate using the 1:24,000 NHD starting with the 2008 WQA. ADB has its own problems which developers at EPA are working on. Again, we would be moving from our own system which is modifiable, based on our needs, to a structured system that is under construction and is not responsive to our needs. Out database, WATS is under development with an integrated TMDL module currently under way. EPA has a TMDL database, but is completely separate from their ADB. Our database provides a publicly available query tool and interactive mapping tool that are internet based. ADB does not have this capability. The discussion of how advanced any agency may or may not be, in terms of technology, is not meant to slander any agency. Rather, it just highlights the fact that everyone is at different levels of technology and that certain technologies are better in terms of data transmission and future development.

NPDES – Changing the segmentation system will have an effect on NPDES permittees. When segments lengths are longer, it potentially places more restriction at more locations. Such a change is likely to be viewed as oppressive to industry. A complete review of the effects has not been done.

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TMDLS – By changing the segmentation scheme, the number of TMDL beans, and the way they are counted will change. Provisions will have to be made to account for the 1996 lawsuit, which bases TMDLs on both a water layer and a segmentation scheme that is no longer being used.

LLID –LLID will be used as a stepping stone to NHD. A lot of work has already been done to ensure LLID compatibility with the NHD. Ecology has a large investment in LLID. The LLID water layer is jointly being used by Oregon and Washington as a singular basis for environmental planning.

NHD – The preferred water layer for national use is the NHD. Right now, there is a NHD, but the scale is 1:100,000. EPA is working to make a 1:24,000 scale version of the NHD available, but it simply is not there yet. We hope it will be ready for our use by the 2008 listing cycle. If it is, we will change to that water layer. In the interim, we will switch to the 1:24,000 LLID water layer which is compatible with NHD.

Assessment –One important aspect of changing to a system with larger segments is the probable inclusion of more datasets in each segment. This would improve the accuracy of the resulting assessment.